

THAT WHICH IS CLAIMED IS:

1. A method of establishing a connection
originated by an application executing on a data
5 processing system in a cluster of data processing
systems, the method comprising:

associating a dynamic network address with the
application at the data processing system on which the
application is executing;

10 determining if a received request for the data
processing system to originate a connection is associated
with the application; and

establishing the connection utilizing the associated
dynamic network address as a source address for the
15 connection if the request is associated with the
application.

2. The method of Claim 1, further comprising:
determining if the application has specified a
20 network address for the requested connection; and

utilizing the specified network address to establish
the connection if the application has specified a network
address; and

25 wherein the step of establishing the connection
further comprises selectively utilizing the associated
dynamic network address as the source address for the
connection if the application has not specified a network
address for the requested connection.

30 3. The method of Claim 2, wherein the step of
determining if the application has specified a network
address for the requested connection comprises
determining if a socket for the connection has been bound
35 to a network address.

4. The method of Claim 1, wherein the application comprises one of a plurality of instances of an application executing on the data processing system in the cluster of data processing systems;

5 wherein the step of associating a dynamic network address with the application at the data processing system on which the application is executing comprises associating a dynamic network address with the one of the plurality of instances of the application at the data processing system on which the one of the plurality of instances of the application is executing; and

10 wherein the step of determining if a request for the data processing system to originate a connection is associated with the application comprises determining if a request for the data processing system to originate a connection is associated with the one of the plurality of instances of the application.

15 5. A method of selecting a source address for a connection originated by an application executing on a data processing system in a cluster of data processing systems, comprising:

20 associating a dynamic virtual IP address (DVIPA) with the application at a communication protocol stack of the data processing system in the cluster of data processing systems so as to utilize the DVIPA as the source address for the connection originated by the application.

25 6. The method of Claim 5, wherein the step of associating a DVIPA with the application comprises:

30 receiving a connection request for a connection at the communication protocol stack;

determining if the connection request received at the communication protocol stack is associated with the application; and

5 selecting the DVIPA as the source address for the connection if the connection request is associated with the application.

7. The method of Claim 6, further comprising:
determining if the application is bound to an IP
10 address; and
selecting the IP address to which the application is bound as the source address if the application is bound to an IP address; and

15 wherein the step of selecting the DVIPA comprises selecting the DVIPA as the source address for the connection if the connection request is associated with the application and the application is not bound to an IP address.

20 8. The method of Claim 7, further comprising:
establishing at the communication protocol stack a predefined association of the DVIPA and the application;
wherein the step of determining if the connection request received at the communication protocol stack is
25 associated with the application comprises determining if the connection request is from the application; and
wherein the step of selecting the DVIPA as the source address for the connection if the connection request is associated with the application comprises
30 selecting the DVIPA as the source address for the connection if the connection request is from the application and a predefined association of the DVIPA and the application has been established.

9. The method of Claim 8, wherein the step of establishing at the communication protocol stack a predefined association of the DVIPA and the application comprises processing at the communication protocol stack a configuration statement which specifies the DVIPA and an application with which the DVIPA is associated.

10. The method of Claim 8, further comprising:
determining if the DVIPA is configured for the communication protocol stack; and
generating an error message if the DVIPA is not configured for the communication protocol stack.

11. The method of Claim 8, further comprising:
determining if the DVIPA is active on the communication protocol stack;
activating the DVIPA if the DVIPA is not active and if the DVIPA is in a range of DVIPAs specified for the communication protocol stack.

12. The method of Claim 11, further comprising
generating an error message if the DVIPA is not active and is not in a range of DVIPAs specified for the communication protocol stack.

13. The method of Claim 6, wherein the application comprises an instance of a plurality of instances of an application executing on the data processing system.

14. The method of Claim 5, wherein the cluster of data processing systems comprises an OS/390 Sysplex.

15. A system for establishing a connection between an application and a client, the system comprising:
a cluster of data processing systems;

the application executing on a data processing system in the cluster of data processing systems; and a communication protocol stack on the data processing system in the cluster of data processing systems, the communication protocol stack being configured to associate a dynamic virtual Internet protocol address (DVIPA) with the application so that the DVIPA is utilized as a source address for a connection request from the application.

16. The system of Claim 15, wherein the communication protocol stack is further configured to determine if the application is bound to an IP address, select the IP address to which the application is bound as the source address if the application is bound to an IP address and select the DVIPA as the source address for the connection if the connection request is from the application and the application is not bound to an IP address.

17. The system of Claim 15, wherein the communication protocol stack is further configured to establish a predefined association of the DVIPA and the application and select the DVIPA as the source address for the connection if the connection request is from the application and a predefined association of the DVIPA and the application has been established.

18. The system of Claim 17, wherein the communication protocol stack is further configured to establish the predefined association of the DVIPA and the application by processing a configuration statement which specifies the DVIPA and an application with which the DVIPA is associated.

19. The system of Claim 17, wherein the communication protocol stack is further configured to determine if the DVIPA is configured for the communication protocol stack and generate an error message if the DVIPA is not configured for the communication protocol stack.

20. The system of Claim 17, wherein the communication protocol stack is further configured to determine if the DVIPA is active on the communication protocol stack and activate the DVIPA if the DVIPA is not active and if the DVIPA is in a range of DVIPAs specified for the communication protocol stack.

21. The system of Claim 20, wherein the communication protocol stack is further configured to generate an error message if the DVIPA is not active and is not in a range of DVIPAs specified for the communication protocol stack.

22. The system of Claim 15, wherein the application comprises an instance of a plurality of instances of an application executing on the data processing system.

23. The system of Claim 15, wherein the cluster of data processing systems comprises an OS/390 Sysplex.

24. A system for establishing a connection originated by an application executing on a data processing system in a cluster of data processing systems, comprising:

means for associating a dynamic network address with the application at the data processing system on which the application is executing;

means for determining if a received request for the data processing system to originate a connection is associated with the application; and

means for establishing the connection utilizing the associated dynamic network address as a source address for the connection if the request is associated with the application.

25. A system for selecting a source address for a connection originated by an application executing on a data processing system in a cluster of data processing systems, comprising:

a communication protocol stack executing on the data processing system;

means for associating a dynamic virtual IP address (DVIPA) with the application at the communication protocol stack of the data processing system in the cluster of data processing systems so as to utilize the DVIPA as the source address for the connection originated by the application.

26. A computer program product for establishing a connection originated by an application executing on a data processing system in a cluster of data processing systems, comprising:

a computer readable media having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code which associates a dynamic network address with the application at the data processing system on which the application is executing;

computer readable program code which determines if a received request for the data processing system to originate a connection is associated with the application; and

computer readable program code which establishes the connection utilizing the associated dynamic network address as a source address for the connection if the request is associated with the application.

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27. A computer program product for selecting a source address for a connection originated by an application executing on a data processing system in a cluster of data processing systems, comprising:

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a computer readable media having computer readable program code embodied therein, the computer readable program code comprising:

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computer readable program code which associates a dynamic virtual IP address (DVIPA) with the application at the communication protocol stack of the data processing system in the cluster of data processing systems so as to utilize the DVIPA as the source address for the connection originated by the application.

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